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NOTES

CORRECTION TO "AN ELEMENTARY THEOREM ON THE PROBABILITY OF LARGE DEVIATIONS"

BY TIMOTHY J. KILLEEN, THOMAS P. HETTMANSPERGER AND GERALD SIEVERS

The Pennsylvania State University and Western Michigan University

The correctness of Section 4 in the above paper (*Ann. Math. Statist.* **43** 181–192), which gives examples on the necessity of the conditions of Theorems 2.1 and 2.2, has been open to question. The purpose of this correction is to clarify the discussion of that section and to give a necessary and sufficient condition for Theorems 2.1 and 2.2 to remain valid.

The appropriate choice of the sequence $\{\delta_n\}$ is critical for correct application of these theorems. This was apparent to us from the start and has also been pointed out in a personal communication from Professor J. C. Fu of the University of Toronto. One may usually choose a sequence $\{\delta_n\}$ with $n^{-1} \log \delta_n = o(1)$ such that condition (2.1) fails when the conclusion of the theorem is still valid. However, in the examples we have seen, there does exist a satisfactory sequence $\{\delta_n\}$ which satisfies (2.1).

We have since discovered the following analogue of Theorem 2.1.

THEOREM. *Suppose that X_n is an absolutely continuous random variable with density $f_n(x)$. Then the following is necessary and sufficient for* (2.3). *For each $\varepsilon > 0$,*

$$n^{-1} \log [f_n(\phi_n + e^{-\varepsilon n}) + P(X_n > \phi_n + \gamma_n)/f_n(\phi_n)] = o(1) \qquad \text{as} \quad n \to \infty .$$

The proof is similar to the proof of Theorem 2.1, and with some modification we get an analogue of Theorem 2.2. This eliminates all consideration of the sequence $\{\delta_n\}$.

CORRECTIONS TO "ASYMPTOTIC EXPANSIONS RELATED TO MINIMUM CONTRAST ESTIMATORS"

BY J. PFANZAGL

University of Cologne

The above paper (*Ann. Statist.* **1** 993–1026) contains among others the following errors